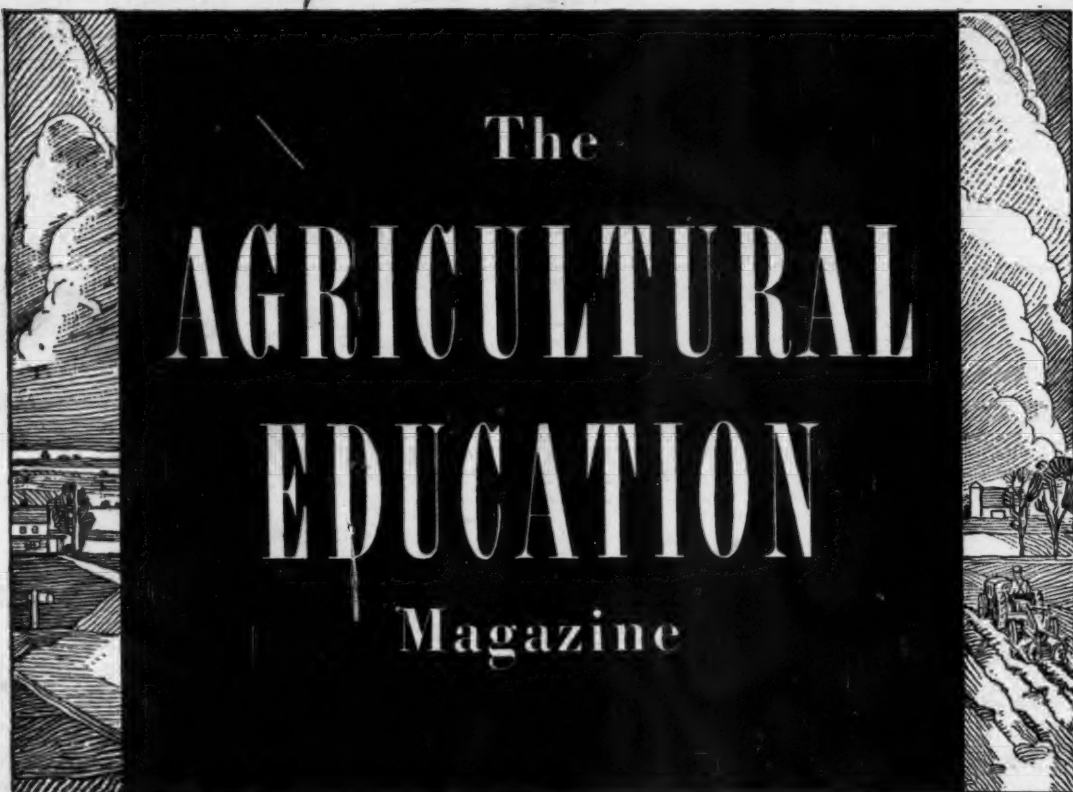


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OF ALL the ways of escape from a life wherein we flounder in possessions, and waste our energies upon things, the best is the country. It is the place of places where a man can live fully and freely, in true contentment.—Ray Stannard Baker.



The Agricultural Education Magazine

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Editorial Comment

Appointment of Federal Agent for Western Region



W. P. Beard

MR. W. P. Beard has been appointed agent for agricultural education in the Western Region, U. S. Office of Education. He succeeds Dr. W. T. Spanton, whose appointment as Chief of the Agricultural Education Service of the Office was effective April 1, 1941.

For a little more than a year Mr. Beard has been specialist in agricultural education, in which position he has assisted in the preparation of subject matter and other professional publications, has worked with the National Standards Committee for Vocational Education in Agriculture in the evaluation of departmental youth in the Western Region.

ments of vocational agriculture in high schools, and more recently has acted as agent for defense training for out-of-school rural youth in the Western Region.

Mr. Beard, who is a native of northern Illinois, received his early education in Illinois schools. He is a graduate of the College of Agriculture, University of Illinois, and holds the degree of Master of Education from the University of Wisconsin. He came to the Office of Education from the U. S. Forest Service, where he was employed as education specialist.

Previous to his appointment to the Forest Service, Mr. Beard served successively as teacher of vocational agriculture in the Brookings, South Dakota, high school; as supervising teacher in agriculture for the South Dakota State College; as state supervisor of agricultural education in South Dakota; and as teacher-trainer in agriculture at South Dakota State College. Mr. Beard participated in the state program of curriculum revision and was in charge of a curriculum study in agricultural education.—J. C. Wright, Washington, D. C.

Increased Responsibilities in Guidance

THE current programs directly and indirectly related to national defense are calling to our attention many problems involving guidance of out-of-school rural youth. In many cases the defense-training courses in farm mechanics have been giving some farm young men a chance to think concretely in terms of vocational preparation for an occupation other than farming. For some of these young men this is the first opportunity of this sort.

Theoretically, these courses should be of interest primarily to those youth who are not needed on the farm, altho they are supposed to be of value to farmers as well. These young men on farms are faced with many questions. Should we try to get into industrial work by taking additional training? If so, should we make this our lifework, or instead, work at the job as long as it lasts, or until substantial savings have been built up with which to start farming? If we do go into farming will we be better off to work with Dad and our brothers on the home farm in the hope of establishment there, or should we do some part-time farming?

Those acquainted with techniques of guidance know that there are other important considerations. Some boys do not have the mechanical aptitudes necessary to acquire skills needed in industry. Others may be unfitted by temperament for machine work or would be unhappy in it.

These problems are made more acute because, for the most part, rural youth have received much less guidance and less adequate guidance than urban youth. Young men are found with problems of vocational and educational choice on which they have previously received no adequate help.

These needs were brought into the national spotlight last winter at the Institute for Rural Youth Guidance in Washington, D. C. The institute pointed out that "since rural young people are rich in the sturdy vocational virtue of willingness to work but especially poverty-stricken in knowledge of voca-

tional opportunities it would seem that guidance and job-placement activities of the rural communities should be stressed." The Institute further urged that rural youth "be cautioned not to move aimlessly to other locations in search of defense jobs that may not exist."

It is apparent that teachers of agriculture can be of real service to young farmers subject to military service and to young men from farms who are trying to decide which way to move, as well as to those young men who are trying to get a start in farming for themselves. The effectiveness of what teachers do by way of vocational education will depend in large degree upon the guidance that is given.

Time for Planning

TEACHERS of agriculture generally, are noted for their emphasis upon planning. They expect boys enrolled in their classes to go into considerable detail in making plans for conducting their projects. They encourage boys to make long-time plans covering two to five years or more. Teachers of farm shop require their students either to draw plans for proposed construction projects or to select suitable plans from those available.

The underlying principles on which teachers justify these requirements may vary. Some teachers think that time off for planning will help boys to avoid mistakes made later. Others feel the work done on the job later on will be of higher quality. Still others use these plans as a basis for later evaluation of the work which the boys do.

Whatever value accrues to the making of such plans, it is logical to expect similar values to teachers of agriculture from the making of plans for the local programs of vocational agriculture for which they are responsible. It is possible during the school year to become so busy in carrying on various activities as a part of the local program that little thought may be given to thinking thru the program as a whole and to replanning it.

All good teachers and other leaders in agricultural education agree pretty well on the importance of local planning. There may be differences of opinion as to techniques. In the Professional Section of this issue is an article in which the author expresses points of view quite at variance with those expressed in an article by another writer on the same subject two months ago. These leaders differ in their ideas of how to go about evaluating programs. Both, however, believe in local planning by teachers of agriculture and in securing assistance in this planning thru local, lay advisory councils. They would also agree that such local councils should assist in the evaluation and replanning of local programs.

The summer months offer an opportunity for teachers to study local programs to better advantage than would be possible during the year. There is time for gathering additional data, for summarizing results, for uncovering new problems, for meeting with councils or committees, and for conferring with individuals who are in a position to lend assistance or advice. During this month and next, it is possible to do some constructive thinking and planning that may result in remarkable improvements in local programs, both for the coming year and from the long-time viewpoint.

How to Make This Magazine a Part of Your Library

WITH this issue which starts a new volume readers will find inserted the index to volume 13. This represents 192 pages of professional reading for teachers of agriculture. Teachers will wish to reread some articles and to preserve them for future use. A new binder for this purpose is now available. It is similar to the old one, except that it has three rings instead of two posts and sells for 50c, postpaid, instead of \$1.00. These binders can be secured by ordering direct from L. L. Anderson, Meredith Publishing Company, Des Moines, Iowa.

A. K. GETMAN

Professional

R. W. GREGORY

Farm Research Narratives

The Survey Method of Conducting Research

C. L. ANGERER, Department of Agricultural Education, Oklahoma A. and M. College

in collaboration with

S. W. Warren, Associate Professor of Farm Management, Cornell University

A TRANSLATION from Latin to English by Fairfax Harrison of Virginia reveals the fact that Cato, that inimitable old Roman who lived about two thousand years ago, was one of the first to use the survey method. He probably did not use the same procedure as is used by teachers of vocational agriculture and others today; nevertheless, he did make certain observations which were written down, and which were used later in forming such conclusions as pertain to buying a farm, laying out and stocking the farm, feeding and caring for livestock, et cetera. His random notes reveal much shrewd common sense. Several illustrations are:

"When you have decided to buy a farm, be careful not to buy rashly; do not spare your visits or be content with a single tour of inspection. The more you go, the more will the place please you, if it be worth your attention. Give heed to the appearance of the neighborhood,—a flourishing country should show its prosperity. When you go in look about, so that, when need be, you can find your way out."

"When you inspect the farm, look to see how many wine presses and storage vats there are; where there are none of these you can judge what the harvest is."

"In his youth, the farmer ought diligently to plant his land, but he should ponder before he builds. Planting does not require reflection, but demands action. It is time enough to build when you reach your thirty-sixth year, if you have farmed your land well meanwhile. When you build, let your building be proportioned to your estate, and your estate to your buildings."

"Near the house, lay out a garden with garland flowers and vegetables of all kinds, and set it about with myrtle hedges, both white and black, as well as Delphic and Cyrian laurel."

Early Experiences With the Survey

Magon, the Carthaginian, advised: "If you buy a farm, sell your house in town, lest you be tempted to prefer the cultivation of the urban gods to those of the country. The farm will then be better, fewer mistakes will be made, and you will get larger crops. The face of the master is good for the land."

Dr. G. F. Warren made the survey method a popular procedure for collecting information on farms. It is said that he walked and rode many miles over the State of New York gathering data which, when summarized, would be of value to farmers in their business.



C. L. Angerer



S. W. Warren

Survey Method Used in China

J. Lossing Buck, Head of the Agricultural Economics Department, College of Agriculture and Forestry, University of Nanking, China, used the survey method effectively in a study of 2,866 farms in 17 localities and seven provinces in China. The following is taken from his book "Chinese Farm Economy."

"The method used in the collection of all data was the survey method in which the inclusion of a large number of farms offsets the disadvantage of no written records. It is, in fact, almost the only practical method where there is such a large percentage of farmers who rarely keep written accounts. The Chinese farmers remembered quite clearly, however, the details of their previous year's business, since each detail is a more or less important part of their daily lives. The errors attendant upon the survey method are relatively small, provided the sample is representative and bias is eliminated or accounted for, provided the number of records is large enough. The chances of a farmer's estimating too high or too low are equal, and the average of such answers undoubtedly represents conditions more nearly than would information obtained from a limited number of written records, even if that were possible.

"There are imperfections and disadvantages in any method, but where the survey method has been used in China, it has proved practical for obtaining a good understanding of the farm business of China. To these readers who are unfamiliar with the survey method, the publications by Warren and Spillman on methods of making agricultural surveys are commended."

Stewart and Getman gave emphasis to the survey method in their book, *Teaching Agricultural Vocations*. "The survey is an expression of a wider utilization of farm and human resources. With the reorganization of agricultural

instruction in the secondary schools, there has been a recognition of a need for wider experience. Such experiences include not only the business and productive aspects of the enterprises on the home farm, but also those of the best farmers in the community who are located on one or more types of farming areas from which the school secures its enrollment of rural students. The survey has two main uses:

1. The survey of the farm, its crops, its animals, its markets, its roads, and its several business and community relationships for the purpose of discovering the status and tendency of farming as a basis of what to teach.

2. A survey of the farm and relevant factors in farming for the purpose of discovering a basis for the general organization of instruction and for the determination of the most satisfactory method of procedure."

Procedures in Using Survey Method

The following are certain desirable points to consider in making use of the survey method:

1. Use a soil map, a township map, and with the aid of leading farmers determine and roughly locate the type or types of farming areas in the community.

2. Select the type or types of farming from which can be secured the largest number of students.

3. Determine the number of farms to enumerate.

4. Have all records taken by the instructor of vocational agriculture because:

- a. Accurate data are needed and can be secured only by someone trained and mature enough to do a satisfactory job.

- b. The instructor may acquaint himself with a large number of farmers.

- c. He may acquaint himself with the farming types and practices.

- d. He may develop an understanding and appreciation of farming problems.

5. Select the farms and farmers to be surveyed.

6. Choose the best time of year and day to take records such as, during the dull season, during the middle of the morning, just before noon, or in the middle of the afternoon.

7. If possible, know the farmer's interests such as livestock, crops, and such, and start from there in taking the record on his farm.

8. Explain the reason for making the survey such as: use in planning a long-time, community agricultural program; use with adult farmers in evening classes; use with out-of-school rural youth in part-time classes; and use with all-day students in vocational agriculture classes.

9. Obtain an adequate number of records to provide a representative sample. Avoid hand-picking farms. (At least 35 or 40 farms should be included for each type.) A surprising degree of accuracy is obtained by making a large number of observations.

10. Complete the surveys in a given school year since weather and price conditions change from one year to another.

11. Develop a list of questions which will give a comprehensive picture of the farm.

Values in Course Building

"For determining the vocations in which effective teaching can be done, the local survey is the best means. The business undertaking and the productive enterprise serve as vocational-problem centers or individual-interest cores out of which develop the needs of pupils for skill, knowledge, and social abilities, which shall constitute the subject matter of their learning."

"Every farm is an experiment station and every farmer the director thereof. If we can collect and relate the results of all the experiences and experiments, we shall have valuable agricultural knowledge.

"If such results are obtained from a few farmers or from general observations, the conclusions are not likely to be accurate; but if large numbers of experiences are studied by statistical methods, reliable results may be obtained. A farmer, or any other person, is likely to attribute success or failure to the wrong cause. This is to be expected since so many factors affect success. Success may be attributed to the method of feeding the sheep, when as a matter of fact, the sheep are not paying, and it may be that the cows are keeping both the farmer and the sheep. The farmer may attribute apparent failure to poor fertilizing practices, when it is due to doctor and hospital bills. By studying many farms, the real reasons and their relative importance usually stand out clearly.

"The agricultural survey in its various phases is a recognition of the immense fund of information which is obtainable as a result of experiences and experiments on farms. It is an attempt to make use of these experiments and to separate truth from superstition."²

Relation to Objectives in Vocational Agriculture

In determining the need for making surveys in a community, we may be guided by the "Educational Objectives in Vocational Agriculture," recently revised and published for the use of teachers in Monograph No. 21, U. S. Office of Education. Before we can assist high-school students in all-day classes, out-of-school young men in part-time classes, and adult farmers in evening classes to develop abilities necessary for success in farming, we must know, first of all, how young men in the community have made a beginning and have advanced in farming.

In those localities where vocational agriculture has been taught for several years, there are young men farming now who have received instruction in agriculture for one or more years. A survey of these young farmers should reveal the advancement which has been made by them in their educational status, and the improvement which they have made in their farming programs since leaving high school. It should further reveal the possible need for additional training.

Such a study would also be of value in building a course of study for all-day students on the basis of how young men have made a beginning and are actually advancing in farming. How farmers produce farm commodities efficiently; how they market their products to the best advantage; how farmers conserve the soil and other natural resources; how they manage their farm business; and how they have improved and maintained a favorable social and economic environment are the other major objectives listed.

It is thru the survey method that we may gather such vital information as would be of value in assisting students in all types of classes to develop and attain the abilities necessary for success in one or more of the major objectives, or in a number of the contributory objectives. Until we know what is hindering their progress in conducting their farm businesses, regardless of their limitations, we may form erroneous conclusions as to a need for developing those abilities, which may be minor or irrelevant rather than of major significance in their advancement.

Importance in Program Planning

In Monograph No. 19, "Agricultural Education Programs," we again find the survey method given a place of importance in the various topics listed by the committee: (1) Surveying human resources eligible for education services and providing for placement and advancement of young men in agricultural occupations, and (2) making surveys to provide for a study of cross sections of farm practices, of the practices of the best farmers, of the farm enterprises in an area, of farms and rural population trends, of special experiences of farmers, of the farm organizations within the areas, and of special problems and difficulties. Such surveys constitute an essential means of discovering the facts.

standards attained by farmers who have been successful in managing their business. It will also aid him in planning a long-time community program, in constructing courses of study, and in assisting boys and young men to plan worth-while farming programs.

After the general farm survey has been completed, there will be other important information which the teacher will need and which can be secured thru the survey method. A study of the home farm of each boy enrolled in vocational agriculture should show the size of the farm business, opportunities for supervised practice, number of children in the family, et cetera. A study of young men out of school will show their opportunities for farming at home, working agreements with parents, their needs, interests, and the start they have made in farming. A survey of one or more important enterprises in the community, such as beef cattle, dairying, sheep, wheat, and cotton, will show the number and kinds of improved practices in operation. Surveys of soil and moisture conservation, and of livestock loss prevention will also be of benefit to teachers in formulating their programs.

Analyzing and Evaluating Survey Data

The evaluation of any survey information will depend on how well the data were secured thru this method and how carefully they were sorted and summarized. If a general farm survey had been made, we would expect to secure such information as: size of business, rates of production of livestock and crops, fertility maintenance, use of labor, use of credit, utilization of pasture, and combination of enterprises on farms in the community. In order to evaluate these data, the records should be sorted and arranged by the types of farming. The various factors, such as size of business, may then be studied by sorting the farms according to those having the largest size of business, those having a medium or average size, and those having a small size of business.

Under the heading of rates of production, it will be found that some farmers secure higher yields of crops and livestock than others. Successful farmers usually secure yields ranging from 120 to 150 percent above the average of the community, and these farms may be placed in the high group, those securing average yields in the medium group, and

AN EVALUATION OF FARM ENTERPRISES IN THE COMMUNITY

Enterprise	No. farms in community	% of farms having	Animal units			P.M.W.U.		Yields secured by successful farmers	Trend in County	Importance for projects	Rating
			Total	Av. per farm reporting	Av. no. acres crops	Total	% on average farms				

It is recognized that surveys are important for the building of a sound program of vocational agriculture. It is assumed that a general farm survey, which includes a study of the various management factors, will be a part of the essential activities of every teacher of vocational agriculture. This information, when summarized, will assist the teacher in securing a clear picture of the farming area to be served, and of the

those whose yields are below the average in the low group. Since high labor income is usually associated with a large volume of business, with better than average rates of production and a good combination of enterprises on farms, an evaluation may be made as to the reason why some farmers are more successful than others, especially if the other factors are summarized and studied in the same manner as those mentioned above.

A survey of a particularly important enterprise in a community, such as dairying, will no doubt show that those farmers who secure the highest yields per animal have adopted certain practices such as: testing their cows for butterfat; controlling tuberculosis, Bang's disease, and mastitis; and feeding a balanced ration.

In a similar manner, a survey of young men on farms in the community may disclose that certain ones have a definite working agreement with their parents; that they are increasing the size of their farm business; that they are investing their money in land, livestock, or equipment; and that they are borrowing money for productive purposes.

In agricultural education our problem becomes one of evaluating this wealth of material in order that it may be organized and used effectively. The criteria which may be employed consist of the following recognized factors: relative importance, needs of students, frequency on farms, suitability for project, trends, adaptability to the learner's stage of maturity, the educational and vocational status of the persons who are receiving the training, and the standards which have been attained by the best farmers in the community, (such as pounds of butterfat per cow, pigs saved per litter, yields per acre, weight of calves at six months, et cetera).

After the data have been evaluated, their use readily becomes apparent to agricultural leaders, such as instructors of vocational agriculture. Teachers may use the data in planning a long-time program for the improvement of agriculture in the service area with the assistance of an advisory group of leading farmers; in constructing courses of study for boys enrolled in the all-day classes; or in recognizing the varying agricultural conditions on their different farms, the abilities to be developed, the setting of standards to be attained, and the differences of individuals who are receiving the training.

In addition, its use may be extended to include the instruction of farm youths out of school who have made a beginning or are eager to make a definite start in farming, and therefore need such assistance at a vital time in their lives to reach the goal of becoming successfully established. Finally, the improvement of adult education becomes more valuable when significant problems, which have been discovered as a result of surveys, are presented to them for discussion and solution.

Adjustments being made on farms, the development of a large and comprehensive program of supervised practice, boys working out definite agreements with parents, young men being placed and becoming established on farms, and the desired abilities being developed become realities when the studies, which have been made in the locality, are used in developing programs for training present and prospective farmers. With such a challenge before community agricultural leaders, we must assume the responsibility of making surveys that will give us the needed information on which to build.

¹Eaton, T. H., *Principles in Making the Vocational Course of Study in Agriculture in High School*. Vocational Bul. 98. U. S. Office of Education, Washington: U. S. Gov't Printing Office, 1934.

²Warren, S. W., *An Economic Study of Agriculture in Northern Livingston County*. Cornell University Bul. No. 539, Ithaca, N. Y.

Evaluating Agricultural Education — a Reply

RAY FIFE, Teacher, Education, Columbus, Ohio



Ray Fife

IN ATTEMPTING a comparatively brief reply to Dr. Hamlin's article,¹ may I state that I have not been officially designated by the National Committee on Standards to make a refutation of his criticisms. Generally speaking, however, I believe the members of the National Committee are in agreement with my point of view. It would be almost miraculous if in this initial attempt at evaluation, our Committee and its numerous consultants had not made many errors; yet it would be almost as miraculous if our National Committee had perpetrated such a magnificent tragedy of errors as Dr. Hamlin's article implies. There are certain definite attitudes and policies held by the National Committee on Standards which need to be stated as clearly as possible.

Policies of the Committee

1. There has been a demand for years that a national evaluation of vocational education in agriculture be made. The present committee has the responsibility for the evaluation.

2. Agricultural educators in the United States, including supervisors, teacher-trainers, and teachers, have been asked to co-operate in the present evaluation, but it is realized also that we are probably in the beginnings of a long period of development in evaluation, and other approaches may be made. No one in agricultural education is in a position, at present, to be dogmatic in this matter of evaluation.

3. The National Committee and its national, state, and local consultants not only have taken into account the philosophy and objectives of agricultural education as expressed nationally, but also have included techniques of evaluation which would permit recognition of local philosophies and objectives.

4. The National Committee has recognized that much progress had been made in certain areas of agricultural education such as the development of philosophy and objectives, long-time planning, the use of local, lay advisory boards, etc. It has attempted to set up evaluative criteria for agricultural education which would take such developments into account. For example, in making an Ohio evaluation, page 42 of the "Evaluative Criteria" which deals with planning is usually taken up first. An attempt is made to secure complete information on the items mentioned on this page. Dr. Hamlin stresses local, lay planning, and certainly the Committee has not overlooked this fundamental phase of our program.

5. From the early days of the work of the National Committee on Standards,

Dr. Hamlin has insisted that his theory of evaluation be adopted by the Committee. The Committee recognizes the importance of evaluation of outcomes, but along with the Progressive Education Association and the National Association of Secondary School Principals, considers the Evaluation of Procedures to be paramount at the present time. Certainly, the evaluation of outcomes has not been ignored in the present national evaluation. Many items evaluate procedures in terms of outcomes. The writer has urged Dr. Hamlin to put his theories to the test of actual development and use. Several states are developing different theories of evaluation and this initiative should be encouraged.

Criticisms Considered

Let us consider Dr. Hamlin's criticisms specifically as he mentions them:

1. "It evaluates ways and means of attaining objectives rather than outcomes." It is news to the writer that the National Committee is so apologetic about its procedure as Dr. Hamlin suggests. Dr. John Dewey states in his new book, "If the lesson were learned that the object of scientific knowledge is in any case an ascertained correlation of changes, it would be seen beyond the possibility of denial that anything taken as end is in its own content or constituents a correlation of the energies, personal and extra-personal, which operate as means. An end as an actual consequence, as an existing outcome, is, like any other occurrence which is scientifically analyzed, nothing but the interaction of the conditions that bring it to pass. Hence it follows necessarily that the idea of the object of desire and interest, the end-in-view as distinct from the end or outcome actually effected, is warranted in the precise degree in which it is formed in terms of these operative conditions."²

Who is in a position to say that there is "progress in the wrong direction?" Dr. Dewey takes the opposite position. Our own state leaders are not prone to accept plans in a blind fashion and they have not staged a complete revolt. Why resurrect the old, threadbare debate over the hen and the egg when society has decided that it needs both of them? Certainly we are not without measures of outcomes. Our unusual attention to objectives in agricultural education indicates as much. The writer believes that in a long-time program of evaluation, attention should be given to both procedures or methods, and outcomes. We need to refine our measures of both.

2. "The plan does not meet very well the needs of individual communities." While the Evaluative Criteria do not apply equally well to all communities, the techniques of evaluation make provision for omission of such items as do not apply and the inclusion of other items which do apply. An attempt has been made at a national evaluation resulting in a possible revision of national standards because the Committee was

charged with that responsibility. Why make the assumption that this plan of evaluation will be used to the exclusion of all others? National committees have formulated objectives in agricultural education, and the country has profited from the work of such committees. Are there any peculiarly inherent dangers in the work of a national committee which sets up a plan of evaluation?

3. "It leaves evaluation to 'experts' from outside the community." Certainly the Committee makes no apology for this procedure. It is conducting a professional evaluation. It has no desire to interfere with the right of a local community to pass judgment on its own educational system. It could not do so if it wished. If all evaluation must be local in character, then a host of state supervisors and itinerant teacher-trainers are in for a difficult session when they have their final accounting with St. Peter because all of them are making informal evaluations of local programs day after day. The Evaluative Criteria as prepared by the committee has numerous items dealing with participation by students, administrators, and farmers. Can we assume that these other groups will be without bias? In the early thirties, the writer had his professional work evaluated by a committee composed of a lawyer, a retired businessman, and a railroad engineer. The experience was neither productive nor pleasant. Certainly our profession has the ability to conduct a professional evaluation within the states without the prejudice or bias which is suggested.

4. "The procedure is undemocratic." How does Dr. Hamlin know that the National Committee "distrusts" the ability of the people to evaluate their own program? The Committee has stated frequently that the ultimate goal of its program is professional self-evaluation. The charge which Dr. Hamlin has made in this paragraph is a serious one. It has no basis in fact. The entire legal theory of legislation carried out in the vocational education acts recognizes the local community as the unit of work and the National Committee has had this theory in mind. The Committee has not made the evaluations in the states except as they may have participated on a state basis. Very few activities of a national character have had as widespread participation as this national evaluation. Certainly Dr. Hamlin will need to submit more conclusive evidence than his own personal statements before he can prove his point that the procedure is undemocratic, however popular such a charge may be at the present time.

5. "It is not likely to have very effective results." It is, of course, too early for either the National Committee or Dr. Hamlin to pass judgment on the effectiveness of the evaluation. Progress reports from the different states indicate the likelihood of very effective results. The national tabulations to date also indicate some points of strength and weakness which are common to many departments.

6. "It is time-consuming and expensive, considering the values derived." Again, Dr. Hamlin has expressed his personal opinion based on a very limited use of the criteria, and continued opposition to the present plan for evaluation. The National Committee considered it advisable to make the national evaluation as complete and

thorough as possible since it was to be conducted on a nationwide basis, and since it would offer the basis for a possible revision of standards. Some states have expressed a wish to reduce the scope; others will take certain subdivisions of the criteria and expand them.

7. "It is relatively superficial." Again, personal opinion is expressed. The writer has the opinion of many supervisors, teacher-educators, principals, and teachers to the contrary. Dr. Rath of the Bureau of Educational Research, Ohio State University, states that it is one of the most thorough and complete educational evaluations in existence at the present time.

If the present plan stimulates the profession to a period of evaluation, something will have been accomplished. The National Committee does not fear the "worst." It has confidence that the profession will not adopt any plan carelessly. The Evaluative Criteria as now constituted are not perfect, and no one realizes that fact more than the National Committee itself.

Points of Agreement

Dr. Hamlin and the writer are in complete agreement on one point. There is nothing in his so-called plan which is new. We are heartily in favor of systematic, long-time, local, state, and national, lay and professional program planning. We have been working at it for many years. We are pleased to note that Dr. Hamlin encourages teachers to develop local evaluative criteria, but are disappointed that he does not offer concrete suggestions for evaluating outcomes. Certainly we need to develop all possible forms of appraisal of our programs of agricultural education. The Committee was appointed originally as a National Committee on Standards. When the Committee met at Washington, it was the opinion of the majority of the Committee that it wished more specific and accurate information on the status of the program in the United States before attempting the formulation of standards. There were very definite reasons why the Committee should proceed with a reasonable degree of speed.

The Committee recognized from the first that Evaluative Criteria could not be prepared which would be completely adapted to each individual community of the nation. It secured all the help possible in order that the Criteria might have as wide application as possible. Following the national evaluation the Committee expects to revise the Criteria for such use as the profession cares to make of them. In Ohio, we already have evaluative studies under way which promise to be an improvement in either technique or content. Certainly our experience with the National Criteria has neither perverted our point of view nor disgusted us with all evaluations. Indidentally, Professor L. R. Humphreys of Utah, President of the American Vocational Association, is chairman of the National Committee rather than the writer. He has contributed a wide experience in evaluation to the work of the Committee.

In concluding my reply, may I make the following general comments which can certainly be supported by many statements in Dr. Hamlin's article?

1. Dr. Hamlin has not set up a tangi-

ble plan for evaluation. He has not even developed the germ of an idea on an experimental basis in his own state although he may be working in that direction.

2. He has not given definite evidence to support his conclusions.

3. There are certain weaknesses in his theory which he has not stated even though he may recognize them.

The Committee is interested in constructive criticisms based upon an open-minded approach to its plan of evaluation and upon sufficient experience in the use of the Criteria to have knowledge of their application in different situations. It is interested in the creation of other plans which the agricultural education profession may see fit to develop. It cannot assume immediate and practically complete responsibility for the development of all the ideas and theories of evaluation which may be suggested to it.

1. H. M. Hamlin, "Planning and Evaluating in Agricultural Education," *The Agricultural Education Magazine* XLIII (May, 1941) 204-7. This article by Dr. Fife is in response to an invitation extended by the editor to others who wish to write on this very important question, whether they agree with the criticisms originally presented or not.—Ed.

2. John Dewey, *Theory of Evaluation*, Chicago: University of Chicago Press, 1939.

Program Planning in Arkansas

FIFTY-EIGHT local advisory committees, comprising some 600 persons, have participated in agricultural planning of local programs of vocational agriculture in 20 counties of northwest Arkansas.

According to the programs set up, 156 classes in high schools will enroll 2,465 students, 89 out-of-school classes will enroll 1,483 pupils, and 5,326 adult farmers will study agricultural problems in 227 evening-school classes.

The soil improvement program includes instruction and performance in terracing 9,000 acres, contouring 10,000 acres, sodding 3,800 acres, and strip-cropping 5,270 acres. Two hundred sixty-nine stocks are to be constructed in the livestock development program.

Improvement in the cropping program includes the planting of 5,626 bushels of certified cottonseed, 1,117 bushels of corn seed, 397,750 pounds of lespedeza seed, 39,500 pounds of vetch, and 578 tons of fertilizer used according to recommendations of the state experiment station.

Seven hundred and seventy-two head of breeding stock will be distributed among FFA boys and adult farmers of the community, and 328,000 head of approved poultry will be distributed to the boys to improve their flocks.

More adequate equipment will be provided by construction of 64 seed treaters to combat seed-borne diseases, and by the induction of thirty-six ensilage cutters to assist in fitting 187 trench silos which are to be dug.—*Arkansas Vocational Visitor*, March, 1941.

A man has come to himself only when he has found the best that is in him, and has satisfied his heart with the highest achievement he is fit for.—Woodrow Wilson.

A. M. FIELD

Methods

The Development of Good Teaching Methods

H. E. BRADFORD, Teacher Education,
Lincoln, Nebraska

GOOD teaching methods always involve both techniques and philosophy. If a teacher emphasizes techniques to the exclusion of philosophy, he finds it difficult to adapt his "pet" methods to new situations. Philosophy must include a good understanding of psychology because the method of teaching must be adapted to the kind of subject matter under consideration and to the types of mind and attitudes of the learners in the class. And last, but not least, the teacher must always set up his objectives in such a way that they will become the bases for the development of his methods.

The foregoing remarks are trite and commonplace to the student of teaching methods. However, many a thoro student of methods finds it difficult to make this philosophy work in terms of specific objectives and definite methods. It is one thing to speak in terms of theory and quite a different matter to suit the theory to the situation.

Recently the writer asked 10 Nebraska teachers of agriculture to send him descriptions of successful teaching methods in action. The teachers were given the list of methods outlined below and asked to write a story of one method that seemed to be successful.

Methods of Teaching

1. Uses of illustrative material and evaluation of results
2. Making the supervised farming program an essential and useful part of the classroom teaching
3. Describing certain methods that have been successful in attaining the following objectives:
 - (1) Developing confidence
 - (2) Developing managerial ability
 - (3) Developing initiative
 - (4) Creating sustained interest
 - (5) Developing shop and farm skills
 - (6) Developing certain types of leadership
 - (7) Increasing the number of approved farm practices used on home farms
4. Adapting and arranging experimental and other data for use in classroom teaching
5. Describing methods successfully used in producing certain results with young-farmer and adult-farmer classes.

From all the contributions submitted, four stories are being used in this article to show how teachers do analyze situations, formulate objectives, and then develop methods to accomplish their purposes.

Herbert Hartley, now teacher of vocational agriculture at McCook, Nebraska, submits the following description of his methods used in correlating



H. E. Bradford

the supervised farming program with classroom teaching. Mr. Hartley is keenly conscious of the need for definite plans to make the classroom teaching functional thru close and repeated contacts with the farming program.

Making the Supervised Farming Program an Essential and Useful Part of the Classroom Teaching

"Tying up the farming program of the all-day student in vocational agriculture with classroom teaching is a problem that all agriculture teachers have to cope with. Some have solved this problem satisfactorily; others have not. The practicability of the things that are taught in classroom and laboratory are measured on the 'proving ground' of the student's farming program. Where, then, is a better place to study the boy's farming programs than in the classroom?"

"Many methods are used to correlate more closely class, field, and pen. All have the same primary objectives:

1. To create sustained interest
 2. To increase the number of improved practices used on the farm
 3. To develop ideas and managerial abilities
 4. To establish better farming programs for every boy
 5. To do a better job of teaching
 6. To develop operative skills
- "Here are some methods and devices that I have found to be successful.

1. Motivation
 - Using specific project examples to explain points to boys in class
 - Having boys relate project experiences to 'clinch' a point
 - Having boys in class help solve another boy's project problem
 - Using actual local diaries and records when learning how to keep records, instead of the outline in practice project-record book
2. Conference periods
 - Group meeting of all boys having the same kind of project, and a study and discussion of individual and group project problems
3. Classroom
 - Individual study (project reference reading)—each boy studying the project job that is of greatest importance to him at the time. These to be jobs that are not of general class interest and are not to be studied by the class as a group at any time during the year. Must pertain to some phase of the boy's farming program (production project, farm-betterment project, or supplementary farm skills). A definite study outline should be used to guide the boy.
 - Individual study. Each boy can write his own project agreement; he can do his own budgeting and project planning because individual help and guidance is reduced to a minimum by the *Project Booklet*. This booklet outlines these project jobs in such a manner that general help and instructions are all that are necessary.

"In group study in class, when the whole class studies the same job at the same time, many boys spend valuable time studying a job that is of no interest to them and which does not pertain to their farming program. Neither is it of any importance on their farm. The use of individual study concerning farming programs vitalizes the classroom work and will go a long way toward correlating and integrating the project program with the classroom instruction.

"If we correlate more closely the classroom instruction with a boy's farming program, we will do less 'force-feeding' and more 'self-feeding'."

John Martin moved from Loup City to Grand Island, Nebraska, last summer and he is now a busy man organizing and developing a brand new department of vocational agriculture in a city of 19,000, located in the valley of the Platte River. He found an objective out of his many experiences and sent the following anecdote to show how the method worked. It is encouraging to find that so many teachers do have definite teaching objectives in mind and

that they do seize an opportunity when it appears.

Developing Responsibility

"One often wonders how much responsibility he dares give a boy of high-school age. To find out something about this I decided to see how far I could go.

"The group of boys in my advanced class had been with me for three and four years. Among the things they had studied were butchering, vaccinating, running contour lines, culling chickens, etcetera.

"One of the members of my young-farmer group was married and was farming not so very far from town. He wanted to do some contouring and asked me if I would like to have the boys run the lines. It happened that at the same time he was getting ready to butcher and also to vaccinate some calves. Realizing this opportunity, I took the entire class out to his farm, divided them into groups, letting four boys do the butchering, three vaccinate, and four run the contour lines. In less than two hours the work was all done—and well done, I found after checking—and I didn't even change to my working clothes. Since then I have had numerous opportunities to put responsibilities of varying degrees on these boys' shoulders and they always do a good job."

How to make the study of farm machinery valuable and interesting is the theme of a story by Elton E. Reinmiller, of Schuyler, Nebraska. Here is a teacher with a wealth of experience who says his method (as described) shows how to use illustrative material and how to develop farm-machinery skills.

Laboratory Work in Farm Machinery

"The teaching of farm machinery is becoming more important as time passes. It is not an easy task for teachers of vocational agriculture to make the work practical and valuable, because a variety of up-to-date implements are quite limited in most departments.

"This is the first year 'farm machinery' is to be offered in my department since this department was started in 1938, and we are offering third-year work for the first time.

"In studying farm machinery there are a number of objectives to be realized. Some of these objectives that the boys can accomplish by laboratory work in the farm shop are:

1. An appreciation of the importance of farm machinery
 2. Ability to select and care for farm machinery
 3. Ability to repair farm machinery
 4. Ability to select, care for, and use tractors
 5. Ability to develop the ideal of keeping farm machinery in perfect condition
- "I am using a new plan this year which I believe is going to surpass any of the other plans that I have tried. In September the year's work in farm machinery for third-year students was outlined to them. Some of the requirements that were set up for each boy were:
1. Help set up two new machines
 2. Make a written report on each machine
 3. Give an oral report on one machine of the two assembled, by designation of the teacher.

"Two boys are assigned to work on a machine together in the set-up operation. The job of each pair of boys is to assemble each machine following the procedure outlined in the instruction book, which comes with each machine. Any adjustments that are necessary to put the machine in perfect working order are also part of their job. Boys who are eligible each year to compete in the farm-mechanics contest will be assigned to the machine which is to be used that year in the contest. Boys have access to additional references in the farm-shop library. This plan takes very little time of the teacher from his other farm-shop supervision.

"During my six years of teaching farm mechanics I have found this plan excel all other plans that I have tried. It is popular with the boys and I believe that it has possibilities."

Now comes a tough one in the form of a method for teaching abstract principles of genetics. Ralph Benton of Columbus, Nebraska, tells how his boys understood the principles and liked the method of illustration. Mr. Benton recognized that maturity in the class was necessary for successful teaching of this problem. He saw a good teaching opportunity when a boy asked for an explanation of the color phenomenon in the red and white calf. In that question

lay the 'felt need' for information. Then came the blackboard drawings and the explanation of the principles of genetics represented in the problem.

Genetic Principles in Breeding Livestock

"To a class of 18 senior boys, ages 17 and 18, a series of lessons have been given on the subject of livestock improvement which covered the topics of selection of individuals, reproduction, artificial insemination, breeding systems, pedigrees, heredity, Mendel's Law and genetics, with emphasis on genetic principles in operation.

"I have never before taught this material but felt that this particular group of boys was mature enough to understand and appreciate the information. My efforts have been well repaid as these lessons stimulated and held the interest of the class better than anything else that has been presented thus far.

"The boys had many questions to ask and the stage was nicely set when one member, whose father is an Angus breeder, wanted to know what happened to cause one of their cows to give birth to a red calf. Right upon this question came another from a boy whose father maintains a large herd of Holsteins. This boy mentioned that he and his father visited a Holstein breeder in Iowa last summer and there saw a red-and-white calf from a purebred black and white sire and dam. He stated that neither the breeder nor his father could give a really satisfactory answer as to why this happened. He had been told that probably somewhere among the ancestors was an animal with some red in it.

"I intend to use this same material for a series of meetings with my young-farmer classes and feel certain I will get just as good results."

The purpose of these illustrations is to bring out the point that good teaching methods are capable of analysis. When the teacher begins to examine his methods and to evaluate them by the use of certain standards and principles—at that moment he begins to show promise of development. It is true that one sometimes finds a so-called "natural" teacher who seems to proceed along correct lines without knowing why his methods are good. He is much like an extraordinary backfield man who cannot tell new players just how he produced such phenomenal results on the gridiron. He seldom makes a good coach.

Of course, no one believes that good methods alone will make a teacher a striking success. Other factors such as physical energy, mental initiative, personality, and attitude enter the picture and affect positively or negatively the

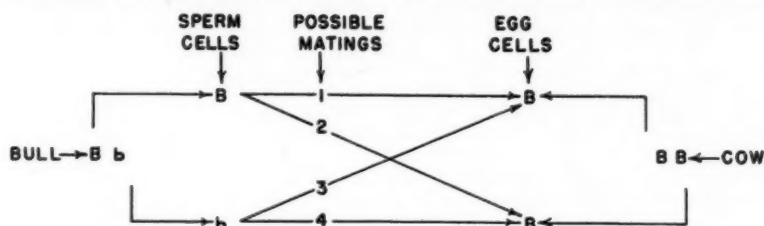


Figure 1—Possible results of mating a black-and-white Holstein bull carrying red with a black-and-white Holstein cow carrying red. The lines indicating the possible matings are numbered 1 to 4.

"The boys had the idea that among purebred animals only offspring with the regular, or standard color markings could be born.

"The class already had the information relative to cellular division of mitosis and an understanding of cells, chromosomes, and genes and the formation of sperm and egg cells for reproduction.

"To illustrate genetic principles in operation and to explain the occurrence of an occasional red-and-white Holstein calf being born from normal appearing black-and-white parents, I placed the two following illustrations on the blackboard and I used the accompanying information.

"Every Holstein cow has two genes having to do with color. These genes are located opposite each other on one of the thirty pairs of

chromosomes of each sperm cell and egg cell possess. "Letters may be used to represent the genes. Capital "B" may be used to represent a gene which produces black. Small "b" may be used to represent a gene which produces red. "The remainder of the explanation concerning Fig. 1 dealt with various mating combinations and the possible results. The meanings of the terms 'dominant' and 'recessive' became clear thru the 'calf' illustration. Much of the class period was devoted to answering questions from members of the class.

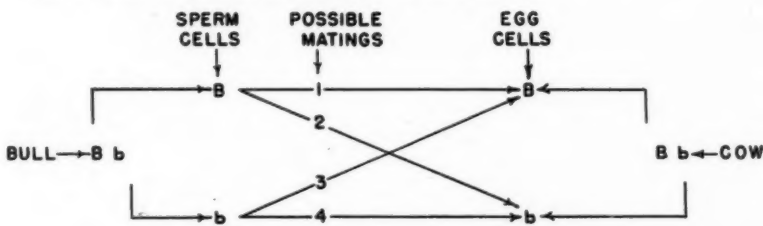


Figure 2—Possible results of mating a black-and-white Holstein bull carrying red with a Holstein cow which is black and white and not a carrier of red.

chromosomes which each sperm cell and egg cell possess.

"Letters may be used to represent the genes. Capital "B" may be used to represent a gene which produces black. Small "b" may be used to represent a gene which produces red.

"The remainder of the explanation concerning Fig. 1 dealt with various mating combinations and the possible results. The meanings of the terms 'dominant' and 'recessive' became clear thru the 'calf' illustration. Much of the class period was devoted to answering questions from members of the class.

"Fig. 2 shown above deals with another combination of color in mating and with the possible results in color of offspring. Again the interest was keen, and questions came freely.

"The results of mating a bull carrying red with cows that are pure for black color is illustrated above. In such matings the chances are that half the calves will be black and white and will be pure for color, while half the calves will be black and white but will be carriers of red.

"My references for preparing this material were the 1936 and 1937 USDA Yearbooks of Agriculture, USDA Bulletin No. 1167, 'Essentials of Animal Breeding', and the book 'Livestock Management' by Coffey and Jackson.

A New-Type Herd-Testing Program

R. A. POWERS, Teacher,
Viroqua, Wisconsin

ONE of the services performed for farmers by the department of vocational agriculture of the Viroqua, Wisconsin high school is the testing of dairy herds for butterfat in the community. A favorable contact has been made with the local NYA office, whereby four graduates enrolled with the NYA have been spending 46 hours each month doing the testing, and figuring and recording the results in the dairy-herd record books.

This program was started last January. The herds represented in the part-time and evening classes were used as a nucleus for the association. The boys tested 266 cows in January, 382 cows in February, 486 cows in March, 572 cows in April, and we are still growing.

A charge is made to the farmer of three cents per cow per month to cover all expenses other than labor. We use the two-ounce sample bottles. The farm-shop class made the sample-bottle racks by drilling holes in two-inch planks sufficiently large to hold the same bottles. We then put wire handles on the racks and painted them.

It was possible to purchase spring-balance scales for one dollar each. Sampling dippers were also purchased to complete the sampling outfit for the farmers. In short, we were able to provide the average farmer with a low-cost sampling outfit for less than \$2. The farmers bring their samples to the department from the 16th to the 19th of each month, together with their barn sheet and record books. At that time, our NYA testers are on the job, and complete the job in the allotted 46 hours of NYA time. After the week is over, our samples are tested, and results are posted in each farmer's herd book. The farmers later come over to the school and take home their empty sample bottles and record book.

We feel that our department is not only performing a very worth-while service for the community at a low cost, but our four graduates who do the testing receive \$18.40 each month from the NYA for the week's work. Similar NYA set-ups for testing can be arranged with almost any county NYA office if the teachers of agriculture make application. We have found that this plan gives the teacher a closer contact than ever with the farmers of the community.

Improving Shop Appearance

MANY individuals in the community judge the teacher not by the kind of work he turns out, but in a large degree, by the attractiveness of the shop. It is true that some shops present some baffling problems when it comes to attempting to make them attractive. However, in many cases a well organized clean-up program would be a good start in the right direction. This, of course, must be followed by some organized effort to make the shop a better and brighter place in which to work. Probably the

most important effect of this job is that of setting an example for improvement in the boys' home shops.

Some possible suggestions are: washing windows, taking paint and grease off the floor and walls, repainting the interior, and constructing racks for iron, lumber, nails, and screws. Another idea used by many teachers in training boys to put tools back, is to paint the outline of tools, where each tool is to be kept.

The instructor can well afford to spend some time planning so that each boy will have some definite responsibility. Tool numbers take but little time but prove to be a big help to the instructor.—George West, Chappell, Nebr

J. B. McCLELLAND

Farmer Classes

O. C. ADERHOLD

An Industrial School Offers a Part-Time Course in Agriculture

ELGIN HALL, Teacher,
Worland, Wyoming

LAST October a program of vocational education in agriculture was started at the Wyoming Industrial Institute in the form of part-time schools. Two part-time schools were organized, one on crops and soils and the other on livestock farming.

In the crops and soils section, such subjects as: judging grains and forage crops, soil fertility, crop rotations, preparing and planting a seedbed, harvesting, marketing, and farm management were studied in a series of 21 meetings.

Meetings were held three times weekly, on Wednesday and Thursday nights, and on Saturday afternoons. Attendance was exceptionally good, the average attendance being around 90 percent for the 22 boys enrolled.

Students in this course were boys from all parts of the United States. These boys had committed some crime in Wyoming for which they had been sentenced to this institution, but they had a goal which they wished to reach when released. Many who were to be released during the winter expected to start farming the coming spring. Several of the boys left the institution while the school was in progress.

In addition to the benefits to the individual, such a school also benefits the state because these boys carry on the farm work on a 600-acre, irrigated farm.

The livestock program was even more comprehensive than that in crops. Thirty-four boys were enrolled, and the average attendance was about 85 percent.

The livestock course included breeding, feeding, and caring for all classes of stock and farm poultry. As a final job the boys studied judging livestock, and entered a team in the annual Big Horn Basin judging contest held in Worland the latter part of January.

Some of the boys even earned extra merits by increasing the egg production of a flock of 500 hens to more than 75 percent. The more merits the boys make the sooner they are given their freedom from the institution. As a result, they work very hard.

Mr. M. A. Miller, superintendent of the institute and former superintendent of Washakie County High School called on the instructor in vocational agriculture of the high school to conduct the two schools. Mr. Miller knew the value of this kind of work, having previously served as high-school superintendent for 11 years where vocational agriculture was taught.

The two schools were quite complete, in so far as it is possible to give a complete course in such a short time, and it is felt that many of these boys took better advantage of this kind of instruction than some boys in our public schools.

Four Years of Young-Farmer Classes Based Upon Group Interests*

PAUL ZILLMAN, Teacher, Hamilton, Missouri

WITH the concluding meeting in February, the fourth annual Hamilton young-farmer class was brought to a close with an enrollment of 51 members and an average attendance of 26. This was the largest of the four classes, altho the prospects last fall looked very discouraging. Ten of last year's class of 26 members had gone to work for the REA, were out of town, had enrolled in National Defense classes, or had migrated to California.



Paul Zillman

Various Subjects Are Studied

During the first two years of the class, subject matter centered around specific major enterprises. At the end of two years the class voted for a variety program which was held during the third year. This course included such topics as: (1) Establishing credit; (2) Wiring farm buildings, and costs of operating electrical equipment on the farm; (3) Some sanitation practices that will pay big returns; (4) What every man should know about insurance; (5) Desirable characteristics in a tenant; (6) What local farmers can do to establish and restore wild life in this section of the state; and a number of others of interest to most of the members.

No doubt this type of program has a number of weaknesses but it offered a variety after studying one enterprise for 15 meetings. It was of common interest to most of the boys, regardless of their home situations, and it gave them an opportunity to get better acquainted with a number of businessmen whom they will contact in later life.

Getting Established in Farming

The theme selected for 1940-41 was "Problems in getting established in farming," and consisted of the following programs:

Reorganizing the Class

An early fall meeting of last year's officers was held and the problem was presented to them. These boys seemed as enthusiastic as ever toward holding another class and promised to try to bring the enrollment up to the previous standards. Two weeks before the opening night, letters were mailed to all prospective members. Names were secured from regularly enrolled, part-time students, from students of vocational agriculture, and from a list com-



Ray Keller, Wildlife Agent, Gallatin, Missouri, discusses wildlife conservation with members of the Hamilton young-farmer class.

plied by the instructor thru the summer. The letter contained a brief outline of the subject matter to be covered. Recreational opportunities were mentioned and, of course, an invitation to become a member of the 1940-41 class was extended. These letters were followed up with cards two days before the meeting night as reminders. Twenty-two came the first night. The next meeting was called guest night and 34 attended. The young farmers came from a radius of 12 miles around Hamilton. Thirty of the members lived five miles or more from the school.

1. Outlook for beef, swine, and sheep during 1941, given by H. M. Garlock of the St. Joseph Stockyards Co.

2. Outlook for poultry, dairy, and other enterprises.

3. The business outlook and its possible effect on farm prices, by Edward Gregg, president of three past part-time classes, and former student of Missouri College of Agriculture.

4. and 5. Problems to consider in selecting a farm.

6. Credit facilities available for young farmers, given by the district agent of the Production Credit Association.

7. Possibilities and procedures in securing a farm thru FSA by Caldwell County FSA Agent.

8. Desirable characteristics in a tenant, by a district fieldman and farm supervisor of an insurance company.

9. Soil types, productivity, and possibilities of each in this community.

10. Soil-erosion control and rotations for this locality, by the local CCC agronomist.

11. Possibilities of getting established in farming in this community.

12. The Missouri flexible farm lease. A discussion of the lease form as recommended by the Department of Agriculture Economics, University of Missouri.

In addition to the above subjects three others were discussed, including adapted varieties of hybrid corn, oats, and sorghos, and some lesser topics.

Supervised Farming Activities

Most of the members owned either sheep or hogs, and no particular effort was made to increase the scope of their

supervised practice, except to discuss ways of improving the enterprise each year, and to pass out material concerning enterprises most likely to show profit. An exchange service was set up, and some seed and other products were purchased co-operatively.

A follow-up meeting is held in June to check approved practices, and to provide social activities.

The class met in the vocational agriculture classroom regularly on Wednesday nights, starting early in the winter and ending in February. Subject matter was handled from 8:00 to 9:30 and was followed by recreational activities consisting of volley ball, badminton, table tennis, and basketball. A basketball game was played with the FFA team, and three or four teams played a round-robin schedule at a number of meetings.

**Editor's Note: Mr. Zillman writes, "Before starting my first class four years ago, I clipped all the articles (on part-time work) from The Agricultural Education Magazine and studied them. They provided many essentials that have contributed to the success of our classes. I am glad to offer my experiences to help others."*

Gaining Experience With Classes in Agriculture for Out-of-School Groups*

DWIGHT KINDSCHY, Teacher,
Lewiston, Montana

TWO schools for out-of-school groups of young farmers were conducted by the seniors in agricultural education enrolled in a course in community leadership held at Montana State College my senior year. I think the main object of this program was to convince us that it does not take an experienced teacher with vast stores of technical knowledge to conduct one of these schools. As we were taking a course in poultry at that time and were supposedly well informed on this subject, we thought poultry would be a good topic to use as a starter. After some preliminary inquiries concerning possible locations for the schools, we decided to let the people at Fort Ellis have the opportunity to learn something about poultry.

We first visited some of the community leaders and interested them in the idea. Arrangements were easily made because the school board had turned over the country schoolhouse to the farmers for community purposes.

We Went in Pairs for Moral Support

At one laboratory period of the class all who had cars brought them. We drew a map of the community, divided it into sections with three of us assigned to each section to interview the farmers. We thought it best for two of us to go together—one to do the talking and the other to provide moral support. The reactions we obtained were very encouraging. Usually our visits were rather short and to the point; but occasionally we had a hard time getting away. We had to pass judgment on chicken houses, examine feed, look at newly-born lambs, and at one farm one of the boys even brought in three sick chickens to find out what was the matter

with them. We presented each person visited with typewritten explanations of the meetings, the time and date, and the subjects that would be taken up at each meeting. The sheet also had space for the farmers to note problems in which they were especially interested.

Two of the boys took charge of each meeting. Attendance at the meetings seemed to vary directly with the weather, ranging from 20 to about eight. We provided a little entertainment for the folks the first four or five meetings, put on some skits, and so on; but we ran out of talent, and I think that entertainment is not so important for the older groups.

The farmers seemed to enjoy the meetings, and we had some very good discussions. Of course, saving money was of great importance to them and when one of the boys showed them what they could save by mixing their own feed co-operatively, they were anxious to organize at once.

Breaking the Ice

After this Fort Ellis evening school was well under way, we selected the Holland Settlement as a good location for a part-time course. There is an efficient grade school at Holland, but usually the education of the people in that community does not go beyond the eighth grade. Most of the settlers believe the boys don't need much "book learning" in order to be good farmers, and the boys are kept on the farm helping with the chores and farming with their dads. As a rule, the people in this community don't like people telling them what to do and how to do it. To our knowledge, there had never been any work of this nature attempted there, and we weren't sure of our reception.

As in nearly every settlement of this kind there was one man who was very prominent in all activities, and to whom the others came for advice. Some of the boys called this man one day when he was out in the field with a couple of his sons. He stuck his fork in the side of the straw stack and let the boys go on loading. He proved to be quite an interesting talker and, to our surprise, was very

much in favor of the school. He consented to call a board meeting to see if the rest of the members were willing to let us use the school and promised to let us know by letter as soon as possible.

Our next step was to interview as many of the boys as possible. A son of the community leaders consented to show us where the boys lived. This young fellow helped the school all he could.

We planned for the first meeting to tell the boys our purpose and to let them pick the subject they wanted to take up. At this first meeting there were about 26 boys present and they decided to study "getting established in farming." After the meeting two of the boys put on a very successful skit that we had worked up for the Fort Ellis school. This proved to be a very interesting and easily taught class. In a topic of this kind we didn't find very much concrete material in texts or reference books with which to work, but the young Hollanders furnished all kinds of ideas, and the time spent in discussing their specific problems went in a hurry.

Weather No Handicap

We provided some simple entertainment after each meeting. The boys played some game such as throwing darts. We had trouble sending them home.

Our attendance grew with the number of meetings, and the weather didn't seem to stop these young fellows. At some of the meetings the attendance was so large we had difficulty in accommodating all.

After we finished that series of meetings we invited the boys to come to the college and make a tour around the farm. We showed them thru the greenhouse and the barns and let them judge a class of dairy cattle. In the spring the boys brought in their baseball team and played the agricultural education students on the campus. They made the college boys step to beat them.

We learned a number of things conducting these schools, one of the most important for us inexperienced fellows being that there is nothing to be afraid of, and that it is easier to interest out-of-school groups than all-day classes.

**This article is based largely upon a report made at the Annual Conference of Teachers of Vocational Agriculture of Montana at Bozeman, in 1939. Mr. Kindschy was a senior in agricultural education at Montana State College participating in this program as a student teacher. He is now supervising cadet teaching at Lewiston.—J. B. M.*

Fred T. Ullrich

Mr. Fred T. Ullrich, Director of Agricultural Education at the State Teachers College, Plattville, Wisconsin, died on June 1, 1941, after several weeks of illness. Mr. Ullrich joined the staff of the college (then the Plattville Normal School) in 1914 and has been largely responsible for the development and expansion of the instructional program in biology and in agricultural education. One of the unique features of this institution is the close relationship of instruction in agriculture to the activities on the college farm, and Mr. Ullrich has had no small part in bringing this about.—G. P. Deyoe.

L. B. POLLOM

Farm Mechanics

Safety Precautions in Farm Mechanics in the Shop

GLEN C. COOK,* Teacher Education,
East Lansing, Michigan

The teaching of safe workmanship is in reality the teaching primarily of good workmanship, for safety is only an aspect of the larger and more necessary art of good workmanship.
—Metropolitan Life Insurance Company

IN THIS day of speed and mechanized equipment, involving many mechanical activities, teachers of farm mechanics must be more than ever cognizant of the need to stress safety measures in the shop. It is the responsibility of the teacher to develop in students proper ideals, appreciations, understandings, and abilities for the proper use of tools and equipment. In the past this phase of the program in farm mechanics has not been sufficiently stressed in many shops. Some teachers may have been of the opinion that, since few pieces of power equipment are used in the shop, there is little need to stress safety precautions.



G. C. Cook

Today many farms are becoming highly mechanized thru the use of power machinery, trucks, tractors, automobiles, and rural electrification. Many mechanical abilities pertaining to these should be included in a boy's training in farm mechanics in order to prepare him to cope with the mechanical problems of the farm. Teachers should familiarize themselves with the various safety measures essential in the shop in order to do an effective job of teaching these measures.

General Safety Rules for the Farm Shop

A few general rules should be developed by the instructor with the students concerning safety measures in the shop. Some of these might include the following:

1. Keep the shop well lighted and ventilated.
2. Dress properly for work.
3. Have a place for everything and keep it in its place.
4. Keep the shop clean and orderly—be a good housekeeper.
5. Do not scuffle in the shop.
6. Treat all injuries immediately.
7. Always shut off a machine before making any adjustments.
8. See that all machines are properly guarded when in use.
9. Avoid congregating around machines which are in operation.
10. Avoid working with sleeves which are unbuttoned or which have buttons missing at the cuff unless rolled up. When running a machine keep sleeves rolled up.

11. Always wear goggles when using a grinder which is not properly equipped with shields.
12. Always keep gasoline in a safety container.

"Safety posters suitably mounted on prominently placed bulletin boards should be displayed and changed at frequent intervals. Posters that apply directly to the particular hazards of the shop should be obtained whenever possible."

Some teachers have found it desirable to appoint one boy as an assistant for a week to check equipment for safety and to help prevent accidents by observing the boys from time to time at work. Many teachers have used safety posters of various kinds showing proper procedure in the shop.

Safety Precaution in Woodworking

There are a number of safety precautions which should be considered in teaching woodworking and farm carpentry. Some of these are as follows:

1. Keep tools sharp and use them properly for their intended use.
2. Use care in starting a handsaw.
3. Avoid carrying sharp-pointed tools in pockets.
4. Avoid using tools with loose handles.
5. Do not cut toward yourself when using an edge tool.
6. Do not leave nails projecting from boards when demolishing a building, concrete forms, or other structure.
7. Do not allow lumber to become crisscrossed or scattered so as to make it easy to trip over.
8. Keep eyes above "flying nail" level when driving nails.
9. Use care when sliding the hand along boards that have splinters on the corners.
10. Make sure that all pieces are held firmly in place.
11. Avoid using scaffolding which is not properly supported.
12. Be sure to use guards when operating a circular saw.
13. Keep hands away from a power saw when it is running.
14. Do not stand directly in line with the power saw.
15. Keep floor clean around the saw.
16. Use a short piece of wood to push narrow boards thru a power saw when ripping.

Someone has said, "It is better to use a handsaw to saw wood than to lose a hand sawing wood."

Avoiding Accidents in Sheet Metal Work

Numerous avoidable accidents have been caused while doing sheet metal work. Some precautions to consider in this type of instruction are:

1. Avoid spilling gasoline when filling a blowtorch. If spilled wipe off torch before lighting.
2. Locate the torch so that the flame will not come in contact with combustible materials.
3. Avoid placing hot coppers where they will come in contact with wood.
4. Beware of sharp corners or points caused by cutting. Round or file smooth before using or storing.
5. Pickup soldering irons by the handle.

Safety in Doing Hot-and-Cold Metal Work

The following safety precautions are worthy of consideration when performing jobs in metal work:

1. Keep forge fire under control and do not permit heated pieces of coal to drop on the floor.
2. Be cautious about picking up with the hands any piece of iron near the forge. It may have been heated by someone else and left there.
3. Keep tongs properly adjusted so iron will not slip from them.
4. Hold all pieces firmly in place.
5. Do not use a hammer with a loose handle.
6. Keep tools properly sharpened.
7. When using an electric drill hold piece firmly in place.
8. Do not leave the wrench in the chuck.
9. When using a grinder make sure the grinding wheel is securely fastened in place.
10. Avoid letting the fingers come in contact with the grinding wheel.
11. Hold work firmly when grinding, and wear goggles.

Many minor accidents have been caused in metal work which could have easily been avoided by explaining a few simple safety precautions to the students so that they would be aware of what to do.

Avoiding Accidents While Repairing Farm Machinery

The repair of farm machinery is becoming an important phase in the course in farm mechanics. A few simple safety precautions are well to keep in mind when doing repair jobs.

1. Avoid using wrenches that have rounded corners or which are worn out.
2. Select the proper wrench for the job to be done.
3. Do not rely on a jack or chain hoist to hold up a piece of machinery but block up under it—better be safe than sorry.
4. Keep sleeves rolled up while working around machinery that is in operation.
5. Do not attempt to adjust machines while they are in gear.

Promoting Safety in Handling Tractors and Trucks

The repair of tractors and trucks is an important phase of the farm-mechanics program in many sections due to the use of this equipment on the farm. A few of the precautions which should be taken in the shop are as follows:

1. Be careful in working around manifolds or exhaust pipes which have become hot from operation.
2. When using a jack or hoist always properly block up the parts being raised to prevent any chance for the part to fall on anyone working beneath it.

3. Do not cut toward the body when removing wire insulation.
4. Do not attempt to repair electrical appliances which are "hot."
5. Avoid using fuse substitutes.
6. Follow the electrical code when installing wire.
7. All electric wires should be considered alive until proved otherwise—always play safe.
8. Use the correct kind of tools for the job to be done.
9. Do not attempt to do the job unless you are sure you know the correct procedure in doing it.
10. Avoid shocking another student.
11. Avoid looking at an electrical arc



"Do not rely on a jack or chain hoist to hold up a truck, tractor, or automobile but block up under it—better be safe than sorry."

3. When cranking the motor allow sufficient space and see that the engine is in neutral, the spark retarded, and the brakes set.
 4. When operating a motor inside a closed shop be sure proper provisions are made for removing exhaust fumes.
 5. Do not use the mouth to siphon gasoline which contains tetraethyl lead.
 6. Use the correct kind of wrench for the job to be done.
 7. Avoid using wrenches with rounded corners or which are worn out.
 8. Keep the floor clean from grease and oil.
 9. Destroy all oily and greasy rags.
- In draining a radiator or removing hose connections from a hot motor care should be taken not to come in contact with the hot water.

Safety Precautions in Electricity

Rural electrification is becoming exceedingly important in many communities at the present time. Nearly every farm in some areas is electrified and considerable electrical equipment is being used, consequently work in electricity is coming to occupy greater importance in the farm-mechanics course. Some of the safety measures to consider in the electricity unit are:

1. Always wear rubber gloves when handling any kind of corrosive acids.
2. Be sure that all electrical equipment is properly grounded.

- without protecting the eyes.
 12. Do not leave hot soldering coppers where someone will pick them up.
 13. Always pull the switch or remove the fuse before beginning work on a circuit.
 14. Avoid handling electrical appliances in a damp or grounded location.
- Electricity is one of the most dangerous units in the farm-mechanics program; consequently, every safety precaution should be taken to guard against any possible accident.

Fire Prevention

Care should be exercised to see that only small quantities of gasoline are kept in the shop and that gasoline be kept in a safety can painted red and labeled in a safe place. Fire extinguishers should be conveniently located and the boys instructed how to use them. A few buckets of sand should also be kept on hand. Some have found soda to be an excellent material to use in putting out a fire. Oily rags, as well as any other greasy materials, should be destroyed or placed in a metal container. A member of the fire department may be invited to talk to the class on the importance of safety measures in fire prevention and what to do in event that a fire should break out.

Caring for Accidents

The class should be given some training in giving first aid in the event some

one is injured. The importance of caring for all types of accidents should be stressed regardless of how small they may seem. The first-aid kit or cabinet should be available at all times and kept supplied with all needed materials and supplies. Some supplies commonly found in first-aid kits include: bandage of two or three popular widths, absorbent cotton, sterile gauze, a tourniquet, tincture of iodine, adhesive tape, mercurochrome, ungutentine, peroxide, aromatic spirits of ammonia, bandage compress, scissors, and a first aid guide.

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*Mr. Cook is on leave of absence working with the U.S. Office of Education as Special Representative in Agricultural Education in the National Defense Program.

What Are Our Objectives in Farm Mechanics?

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PROFICIENCY in modern farming necessarily includes considerable ability to work with tools and machine equipment. Any comprehensive plan for farmer-training must provide opportunity for the development of those abilities involving the use of mechanics that are essential to successful farm operation.

We might have two general objectives in farm mechanics:

1. To select and purchase suitable farm equipment and supplies.
2. To perform appropriate, economical farm-mechanics skills.

We are all aware of the condition of machinery on many farms. There are loose bolts, rust, rotten wood, worn bearings, broken and sprung parts, and many machines discarded because of lack of sufficient initiative or skill to replace a broken tongue or some other needed parts. On other farms we find machines in good repair, painted, adjusted, greased, and ready to go.

All Farmers Have Repairs to Make

A large percentage of a farmer's time is spent in adjusting and repairing machinery or in building necessary equipment. Considerable time is spent making repairs and adjustments to our school shop equipment, and our personal and household equipment, all the way from baby toys to the family car.

There is an opportunity for many young men to acquire machinery by making necessary repairs and adjustments on discarded machinery.

It has been said that farmers are going to have to get along with less investment in equipment or depend on higher prices for farm products if success in farming is to be achieved. Boys are inclined to wish to drive expensive, rubber-tired tractors on jobs when many

(Continued on page 18)

Studies and Investigations

C. S. ANDERSON

Research in the Selection of Students of Vocational Agriculture in Louisiana*

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NOT all boys entering or enrolled in schools offering vocational agriculture in Louisiana, or any other state, can meet the specific provisions of the National Vocational Education acts. Many of these boys have no interest in agriculture as a vocation and do not plan to farm at any time; few are actually engaged in the business of farming while in day classes; while some, regardless of their interests, do not have, and can not obtain necessary facilities for supervised farming. Administrators of vocational agriculture, according to the law, are legally and morally obligated to exclude these boys from classes organized and taught by full-time teachers of vocational agriculture. This necessarily implies selecting for training only those boys who desire, need, and have facilities for profiting by the instruction.

The local high school looks to the administrator for policies governing selection and standards of admission, but actual selection must be done by the instructor under the supervision of his principal. Thus far selection has lagged because of a lack of such policies and admission standards. It is highly probable that most teachers desire selected groups for training but fail to obtain them either because of a lack of bases for selection or because they serve under administrators who evaluate their programs according to scope rather than by the quality of work done.

In Louisiana the process of obtaining students for work in vocational agriculture is applied in almost as many ways as there are different schools offering the course. No definite policy has been established encouraging or forbidding discrimination among high-school boys when classes in vocational agriculture are organized, and where some effort is made at selection no recognized admission standards are available to the teacher for guidance; consequently, only a very few well-organized attempts have ever been made.

The need for selection, and bases for use in a selective procedure are problems inherited with the passage and acceptance of the Smith-Hughes law. In Louisiana, no organized attempt was made to solve these problems previous to 1938 when John Herbert, principal and teacher of vocational agriculture at the Grand Prairie School, Washington, Louisiana, undertook an investigation with a view to offering definite suggestions to teachers for obtaining selected groups of rural boys to train for farming occupations.

Procedure

The problem attempted was to determine a procedure, and bases for its

application, for use in the selection of boys to train for farming occupations. An attempt was made to set up weighted standards for use in a procedure of selection that may be applied by local administrators and teachers of vocational agriculture in their efforts towards obtaining select groups. Only standards for admission to all-day classes were considered.

Data for the investigation were obtained from the Congressional acts dealing with appropriations to vocational agriculture, available literature, principals and agriculture teachers in 150 Louisiana high schools and 17 supervisors, and teacher-trainers of the Southern Region.

The study is reported in three main divisions: (1) an argument for a more careful selection of boys for the all-day group; (2) a procedure for admitting boys to all-day classes, including admission or standards; and (3) a plan for the application of the admission standards.

The arguments advanced for selection are based on three sources of evidence: the provisions of the Smith-Hughes law, a survey of related literature, and existing situations in Louisiana as revealed by replies from high-school principals and a like number of teachers of vocational agriculture to a questionnaire. Replies included such data as: (1) number of boys enrolled in all curriculums, (2) the procedures used in admitting boys to vocational agriculture, (3) the standards of admission used, (4) those responsible for selection, and (5) opinions relative to the need for selection in each school.

The arguments for selection based on a study of the Smith-Hughes act and related literature are not only generally known, but acceptable, and will not be repeated here: Instead, those based on questionnaire results are presented because actual situations were used as bases for argument. Only some of the more pertinent conditions are noted.

Practices and Standards Contrasted

In 22 percent of the schools contacted, four years of vocational agriculture was required of all high-school boys, while in 11 percent of the schools two years of agriculture was required of all boys. In other words, boys entering high school in one-third of the high schools had no choice of a curriculum, but were forced to enroll in classes in vocational agriculture regardless of their interests, needs, or facilities!

In 31 percent of the schools boys elected a curriculum without guidance of any sort. Only four percent of the schools claimed that guidance or selection was done in an organized way; 26

percent made some attempt at guidance; while six percent admitted assigning boys to vocational agriculture without benefit of counsel.

Contrasting what was actually being done towards selection with what principals and agricultural teachers thought should be done, 90 out of 121 principals and 116 out of 129 agriculture teachers stated that vocational agriculture should be offered only to select groups. To the question, "Do you favor selection?" 96 out of 117 principals and 119 out of 127 agriculture teachers committed themselves in favor of selection. Out of 78 principals, 70 stated that selection was practical, while 82 out of 84 teachers made the same statement. Only three teachers registered objections to selection, and in no school was a definite procedure for selection revealed.

In describing the situations existing in their schools, 49 high-school principals and 73 agriculture teachers indicated an urgent need for selection. At the same time, 63 teachers reported that they were forced to swell their all-day classes with boys who were unable to profit by the work.

Derivation of a Basis for Selection

Herbert properly concluded from these and other data that a need for selection of boys for all-day classes in vocational agriculture existed in most Louisiana schools offering the work. He then set about determining a procedure that would be useful in a plan of selection. To that end, proposed bases for use in such a plan were submitted to state supervisors, and teacher-trainers in the Southern Region with the request that they indicate the bases for selection that should be used in a selective procedure. Agriculture teachers in Louisiana were sent the same questionnaire with a like request. According to the consensus of opinion of those replying to the questionnaire, 13 bases for selection, or standards for admission to all-day classes submitted, were ranked in order of their importance.

These bases conform to provisions of the Smith-Hughes law, and compare favorably with the characteristics of an efficient vocational program which were developed earlier in the study for purposes of comparison.

Opposite each admission factor, with the exception of two which were eliminated, supervisors and teacher-trainers were asked to evaluate the factor in such a way that the total value of the bases checked would equal one hundred (100). Twenty-two men co-operated, and in order to have values that would be comparable the total of values assigned to each factor was divided by 22, the number of responses included in the tabulation. Each number thus obtained was then designated as the "comparative value" assigned to each of the 11 bases, which in turn were called admission standards, or factors. For purposes of clarity each factor is repeated with its assigned comparative value:

1. The boy wants the course.....27
2. The boy has facilities for supervised practice.....25
3. The boy plans to farm.....13
4. The boy lives on a farm.....9
5. The boy will probably engage in farming.....5
6. The boy is 14 years of age.....5
7. The boy is farming.....4
8. The boy is of average intelligence.....3
9. The boy is enrolled in high school.....3
10. The boy has a farming background.....3
11. The boy owns farm land.....3

These evaluated factors are suggested for testing points to use in a chart for rating boys who wish to enroll in all-day classes. Candidates offer varied reasons and qualifications to gain admittance. The evaluation of qualifications claimed by these boys, and their subsequent acceptance for training or rejection constitute the initial step in the process of selection.

Technique for Applying Rating Chart

In applying the rating chart, each boy is given a rating on each of the 11 testing points, based on the comparative value of each point and the evidence submitted by the boy. To obtain evidence for rating, it is suggested that each boy submit an application, using a form on which he answers certain questions concerning: (1) reasons for desiring to enter vocational agriculture, (2) present and future plans, (3) farming status and experience, (4) facilities for supervised farming available to him, and (5) parent occupation, status, and plan.

Herbert recommends a personal interview between the boy and the teacher of agriculture for purposes of making and receiving the application. Later, the principal and the teacher review the evidence submitted and rate the applicant on each of the testing points or admission standards making up the rating chart. A summary of ratings made on all of the standards makes up the applicant's total score and indicates his eligibility for admission. While a score of 100 is possible, 68 is suggested as a minimum score for admission. This figure was obtained by averaging the minimum acceptable rating suggested by those co-operating in the study.

Applicants may be classified into three groups: (1) accepted, (2) accepted on probation, and (3) rejected. The probationary group is suggested for classifying boys who rate close to the minimum score and who apparently can meet requirements at an early date. Boys placed in this group must be reclassified at the end of the probationary period and disposed of according to the evidence submitted at that time. One semester, or four and one-half months, may constitute a fair period of probation.

Boys who are rejected should be made familiar with the reasons why they are refused admission to the course in vocational agriculture. At the same time, it is opportune to assist each of these boys in deciding upon the most useful course the school has to offer him.

Conclusions

Some of the more pertinent conclusions reached by Herbert include:

1. There is a definite need for a more careful selection of boys for the vocational agriculture course offered by Louisiana schools. The lack of a definite admission policy and a procedure has created confusion in many schools, and has resulted in a great loss to society and to individuals.

2. There are no devices or procedures available at present that will obtain a perfect group of trainees. Standards set up for admission should be elastic enough to prevent the exclusion of boys who can profit by the course, and rigid

enough to keep out boys who can make no use of the course.

3. It is the responsibility of administrators to make available to high-school boys training that will equip them to fit effectively into the society of which they will become members. This responsibility can be at least partially discharged thru the use of a selection procedure that is designed to take into consideration the best interests of the boy.

*An abstract presented at the A.V.A. Convention, San Francisco, December 1940, based upon a thesis by John Herbert, Washington, Louisiana.

New Research Bulletin on Supervised Practice

THE agricultural experiment station of Iowa State College, Ames, Iowa, has just issued a bulletin entitled "Supervised Practice in Vocational Agriculture in Iowa." This bulletin is a report of an investigation carried on by Mr. Harvey Paul Sweany, formerly graduate assistant, and Dr. J. A. Starrak, professor of vocational education, Iowa State College. The major purposes of the study are (1) to identify the chief factors which apparently contribute to the success of the more effective programs of supervised farm practice now in existence in Iowa and (2) to ascertain the methods employed by the instructors in the development and maintenance of their programs.

The data used in the study were taken from 24 of the 128 high schools in Iowa that were offering vocational agriculture in 1937-38. The authors of the bulletin have summarized the more important of their findings as follows:

"1. Three of the four commonly recognized types of supervised farming practice are represented in the programs of the 24 departments investigated, i. e., the productive enterprise project, the improvement project, and the supplementary farm practice. The fourth type, placement for farm experience, is apparently non-existent in these programs.

"2. Seventeen objectives of supervised farming programs were scored as to their relative importance by the teachers of vocational agriculture in the departments investigated. The five receiving the highest scores were, in order: (a) to establish boys in farming; (b) to improve farming methods used on the individual home farm and in the community as a whole; (c) to develop an interest in farming as an occupation; (d) to provide a means of earning for the boys; (e) to develop methods of economical production.

"3. The boys' own parents constituted the greatest single source of the financial aid required in getting the projects established. Slightly over 50 percent of the projects were financed by the parents, mainly by direct loans; in 30 percent of the cases, the boys' own capital sufficed.

"4. Twenty-three of the 24 departments of vocational agriculture included in the investigation had Future Farmer chapters. In the majority of cases, these chapters carried on a number of activities designed to promote the supervised farm-practice programs.

"5. The instructors investigated seemed to consider the intelligent co-operation of the parents of their students

an important factor in the success of supervised farm practice programs, as they reported several distinct methods which they employ to create the correct parental attitude toward the work.

"6. Only 51 percent of the boys involved in the investigation exercised complete control over the management of their respective productive projects.

"7. In 56 percent of the cases, the practices employed in the management of the home projects were appreciably different from those in current use on the home farms.

"8. Long-time planning of the supervised farm programs is essential, or at least highly desirable, if the objective "establishment in farming" is to be realized. However, it was the common practice in the departments investigated to revise these long-time plans each year, as the program developed.

"9. The instructors in the departments investigated made frequent use of class time and activities in planning and promoting the supervised farming programs of their students.

"10. The purposes for which the instructors most frequently visited the boys on their home farms were as follows: (a) to encourage the boy and increase his interest; (b) to teach some important principle or technique; (c) to assist with the discovery and solution of problems encountered; (d) to check upon methods being used in the projects.

"11. The practices most frequently employed by instructors to develop and maintain interest in supervised farming programs were as follows: (a) project tours; (b) showing at fairs; (c) promotion thru ranks of Future Farmer chapters; (d) news items in local papers.

"12. Considerable co-operative action in the marketing of products of the home projects, in the buying of seed and breeding stock, and also in their production, was reported in the 24 departments investigated. The majority of these co-operative activities were in connection with the production of hogs and growing of hybrid seed corn and the purchase of minerals and seed potatoes."

The report gives a number of examples of techniques used by teachers in achieving various objectives which they have set up. This bulletin should be helpful to all teachers who are interested in strengthening programs of supervised practice and in improving their methods of developing them. Dr. Starrak has announced that copies of this bulletin are available free of charge to anyone interested.—H.M.B.

The only adequate training for occupations is training thru occupations. —John Dewey in *Democracy and Education*.

Future Farmers of America

L. R. HUMPHERYS

Co-operative Activities, West and East

Activities in California

THE Production Credit Association of California instituted this year three types of co-operation in connection with local chapters of Future Farmers of America. In Ventura County this organization promoted a public speaking contest. In Orange County the secretary of the local Production Credit Association visited each chapter in the county and gave a written, true-false examination of 103 questions to juniors and seniors. The high individuals in each chapter met at the annual meeting of the Production Credit Association and were questioned along the lines of popular radio quiz programs.

In Los Angeles County a third type of competition was promoted. Three different types of ranches were selected and the chapter given a set of records on each ranch. The boys in the semi-finals had to build their arguments in either granting or refusing an imaginary loan application on the particular property. In the finals of this contest, the winning boys from each of the three ranch-type divisions participated before the Production Credit Association stockholders. Boys presented their arguments, and questions were asked from the floor by members of the board of directors.

The Delano Chapter of Future Farmers in California has a unique, four-phase program in operation. The agriculture department supervises pre-vocational groups in the elementary schools of the district. The Future Farmer members living near the elementary schools help to sponsor the units for boys in grades six to eight. The second phase of the program is the regular high-school vocational program of Future Farmers. The young-farmer group constitutes the third group, and the evening school absorbs the interests of the adults. There is a program for every boy and adult interested in agriculture in this community.

The Linden Chapter, California, has its father and son banquet during the fall months. The mothers expressed themselves as interested and as anxious as the fathers to see the work being carried on by their sons and other students in Future Farmer activities. As a result, the chapter arranged a fete for the mothers. More than 70 mothers, sons, and guests attended the annual mother and son banquet.

Idaho Chapter Loans

The Sugar-Salem (Idaho) Chapter has invested \$5,500 in livestock in the past 21 months. Much of the money used in financing these projects was secured thru loans from the Rexburg State Bank or the Idaho Production Credit Association. The loans were promoted thru a chapter loan committee—which has been set up within the chapter. A chap-

ter member or group of members wishing to borrow money for use in financing projects first consults with the loan committee. The approval of the loan by the loan committee is the "green light" to proceed with the request for the loan at the bank. The member presents a financial statement to show the liabilities and assets of the father's farm. Loans are made accordingly. The loan committee of this chapter handles on an average of from \$100 to \$200 a week for buying livestock and paying off loans.

Members of the alumni of this chapter are adopting the practice more and more of making loans thru the Production Credit Association amounting to as much as \$400, using their own security, and paying an interest of four and one-half percent. One unusual use of this type of credit was in the purchase of a shipment of feeder steers which required \$1,440 to underwrite the project. Another purchase involved a herd of 26 Guernsey dairy cattle costing \$1,330. Sheep expenditures amounted to \$700, and hog expenditures, \$500. This project has done much to acquaint the members

with the use of proper credit instruments and has put the boys "on their toes" in a desire to make good.

West Virginia Chapters Co-operate

The Clay Chapter (West Virginia) recently sold one thousand pencils, the profit on which amounted to \$25. The pencil corporation paid the commission and awarded a radio as a special prize to the chapter.

The Poca Chapter (West Virginia) sells stationery as a means of raising funds to promote the interests of the chapter.

The Wadestown Chapter (West Virginia) operates the school's store and receives two-thirds of the profits, and the other third goes to the athletic association. The Bunker Hill Chapter (West Virginia) raised one-half acre of high-grade potatoes as a co-operative enterprise.

The Hedgesville (West Virginia) Chapter has set up a chain brood-sow project. A board of directors is elected to direct this project.—L.R.H.

Wild-Life Preservation and Restoration in Arkansas

VICTOR H. WOHLFORD, Assistant State Adviser FFA
Hot Springs, Arkansas

THE Arkansas Association of Future Farmers of America has for several years carried on an educational program within the organization on the subject of wild-life preservation and restoration. Each year, one week is set aside for concentrated study on this subject. Some very worth-while and interesting results have developed from this endeavor. The organization, however, now feels the need of a better and more extensive program—a program which will not only sell wild-life conservation to young men in rural high schools and on farms, but a program which will carry the principles to the adult farmers thruout the state and especially to that group of farm owners who are in a position to go still further and produce results. The various civic organizations thruout the state need to be educated and shown how they, too, can co-operate with the farmer in the preservation and restoration work.



V. H. Wohlford

With the foregoing facts in mind, the Arkansas Association of FFA has been carrying out the following long-time program beginning 1940-41.

Proposed Program of Work

With the foregoing facts in mind, the Arkansas Association of FFA has been carrying out the following long-time program beginning 1940-41.

1. A week of study and deliberation on rules and regulations pertaining to game laws of the State of Arkansas. This is to be carried on by the 187 white and 73 colored chapters in the state. Ten to 12 thousand young men will be reached in this study.

2. Wild-life conservation and restoration educational work to be carried on with the assistance of the FFA members and the local teacher of vocational agriculture. They will reach approximately 10 thousand adult farmers who are enrolled in evening-school classes concerning the use of educational materials, charts, picture shows, discussions, lectures on the value of the wild life on the individual farm, and the savings in damage done by various insects. Plans set up for protection and restoration work on individual farms will be stressed in this study.

3. Five active, interested, and responsible members will be selected from each chapter of FFA in Arkansas. This group will provide approximately 1,300 trained young men from the farms of Arkansas. They have the proper background to enable them to put over the job. It shall be the responsibility of this group of "Junior Game Wardens" as "co-operators" to assist the local teacher of vocational agriculture, the Arkansas Game and Fish Commission, and others who may be appointed, to supervise the program, present it, secure the necessary co-operation and assistance of 500 civic organizations, to present the idea of game preservation and restoration in

the locality, and to emphasize the need for closer and more active co-operation between businessmen and the farmers.

4. Each "Junior Game Warden" will receive a "co-operator's card" indicating his authority and connection with the Arkansas Junior Wild life Federation. With such commission each boy will have authority to assist and co-operate with the duly authorized and employed game wardens of the State Game and Fish Commission, in checking hunting and fishing licenses, bag limits, and out-of-state license. Other assistance will be given the Commission by the Future Farmers when needed along this line. A holder of the commission will not be authorized to make arrests, but will, if necessary, take down car license number and report any irregularity to the State Game and Fish Commission. This report will be closely checked and followed up.

5. Each "Junior Game Warden" to make it a practice to contact and to talk with hunters in the field as often as possible. He will explain to them the Arkansas program, and thereby will fulfill an educational program in the field. In this manner he will more fully secure the co-operation of that great army of hunters, lead them to see the need of co-operation of the farmer, and the need for greater care to be exercised in respect to the farmers' property such as fences, gates, livestock, crops, and game.

6. The "Junior Game Wardens" will co-operate with the State Game and Fish Commission by showing movies of an educational nature; by securing free films from the United States Department of Agriculture on the subject; and by carrying on a visual educational program with the public.

7. This organization will assist in securing small-grain seed for sowing purposes which will provide feeding of wild life during the winter months. Seed will be secured from the State Game and Fish Commission, hunters, civic organizations, and public spirited individuals.

8. Assistance will be rendered by Junior Game Wardens in supervising the sowing of the above-mentioned seeds. Selection of proper locations for sowing purposes and method of seeding will also be stressed.

9. Pest eradication drives will be sponsored and supervised by Junior Game wardens at critical periods, the pests to be pointed out by the State Game and Fish Commission. This movement will be conducted on a statewide basis.

10. Educational materials such as bulletins, pamphlets, circulars, and circular letters, will be distributed by the FFA chapters in Arkansas and supervised by the Junior Game Wardens. Materials of this nature will be supplied by the State Game and Fish Commission, the Federal Government, Department of Agriculture, and other authorized sources.

11. A statewide publicity program related to wild-life preservation and restoration shall be carried on. Material for publication will be furnished by the State Game and Fish Commission, Federal sources—the news articles to be prepared by local FFA chapters. All county and state papers are to be utilized. Articles should appear in papers at frequent intervals.

12. Radio programs will be carried over nine radio stations in Arkansas. Material for these broadcasts will consist of skits, playlets, short talks, inter-

views, round-table discussions, etc. A part of the broadcast material will be provided by the State Game and Fish Commission.

13. Realizing the need for quail establishment and restoration areas thruout Arkansas, the Junior Game Wardens in every county with the exception of two will assist in this work, and will attempt to establish some of these needed areas on the farms of FFA members. Then direct supervision can be had by young men acquainted with the program and with those principles necessary for the success of such an endeavor.

14. Junior Game Wardens will assist and encourage posting of all farm lands with the sign: HUNTING WITH PERMISSION. With such a sign, the hunter will go to the residence of the farmer for permission to hunt. This will create a better understanding between the two and, if the game has been hunted considerably, the farmer can explain the circumstances to the hunter. If winter seed for planting purposes is needed, this understanding between the two may lead to the hunter furnishing seed to insure a good crop of game for the coming year.

Training Future Farmer Officers

R. M. ADAMS, Supervising Teacher in
Agriculture,
Corvallis, Oregon

A GOOD chapter officer does not "drop from the trees." He develops as the result of a chain of circumstances which captivate his interests and desires, and stimulate his ambition and activity in such ways as to bring him into positions of leadership among the other boys with whom he associates in his high-school agricultural training. Some of these circumstances are a part of the boys' environment before the agricultural instructor ever contacts them, and other experiences are deliberately planned by an enterprising teacher.

A boy who has intelligent, public-spirited parents, willing to give time and effort to encourage their children in community service, has a head start on the boy without such encouragement. However, many of the factors that stimulate a boy's ambition and accomplishment rest in the hands of the local teacher of agriculture. The skillful direction of boys' inherent interests and talents often determine what kind of officers the chapter will have. The teacher has the responsibility of developing a leadership among all boys irrespective of what their backgrounds have been in the home and in the community. Let us enumerate some of the most potent forces which the agricultural teacher can use.

First, the example which good FFA officers set before new boys will often lead them to imitate their seniors. Boys, more than men, imitate the acts of others, especially if these acts are appealing. These new boys will often observe programs rendered before farm or civic organizations or pre-agricultural students. The younger boys are often invited to meetings and social affairs where Future Farmers preside. Again, the young boys may see State

and National officers in action. If the job is well done, everybody gets a thrill, and a desire is often awakened within the prospective Future Farmer to imitate his big brother. Good performance promotes imitation.

Second, some of the best leadership training we have had in our chapter has come from the training given by the old officers to the new officers. Please do not underestimate the effectiveness of the training given by an efficient old officer to a new officer. After all is said, a retiring officer, if he is alive, knows where we could improve if he were to continue. This retiring officer is glad to pass his judgment on to the green and inexperienced but ambitious beginner.

Third, and perhaps the most helpful factor in the hands of the adviser, is the teacher's own influence with the chapter officers. If a chapter is to have good officers, the adviser must set up effective training procedures. To have good officers, good farmers, and good speakers requires training suited to the respective purposes. A program for training FFA officers may be considered a part of the teacher's assignment. Indeed, a part of this training may well be included as a part of the scheduled events of the school day. Why not? If we are to have leadership, so much needed in these days, we must plan for leadership training. In such cases the values resulting from the training must justify the time spent.

Fourth, a good FFA officer is a product of experiences and opportunities which must be offered in the FFA organization. This says, in effect, if you want leaders coming on year by year, a program of leadership must be in the process of operation in which a big majority have an opportunity to participate. Boys want to be kept busy in an organization before being elected to office. A member should stand high on the membership chart of the chapter, showing a well-rounded participation in the activities of the group as a qualification for office. The more the member takes part in and, consequently, the better he understands the program, the better officer he will be.

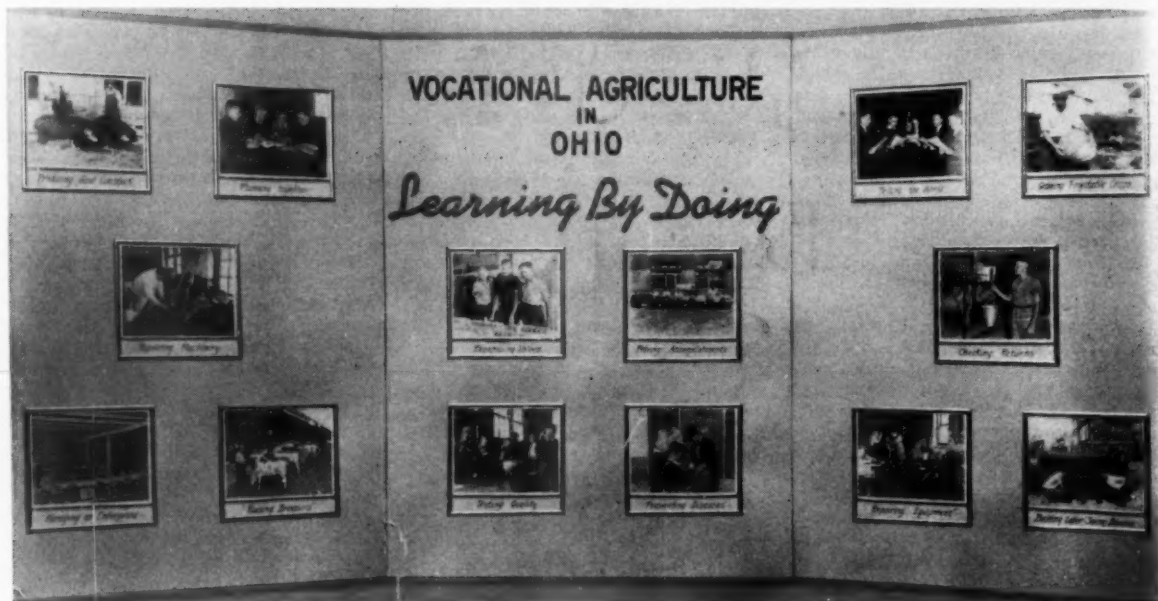
All activities in a chapter may make some contribution in training for leadership. Some activities contribute more directly to leadership than others. Among these I would include participation in co-operative effort, public speaking, and practice of parliamentary procedure. This means that the better officers will come from the more mature upperclassmen seasoned in experience. This does not mean the younger classmen should not be elected as officers. On the contrary, all FFA members should be eligible for certain responsibilities, large or small.

Another element in training Future Farmer officers should be mentioned. I speak of leadership-training conferences in which the boys about to hold different offices get together under adequate direction to discuss and outline their duties and how they should be carried out. We do this in our state each year with considerable success.

In closing, let me say that no teacher should fail to make the maximum use of the new FFA manual. Every boy should be encouraged to learn the contents of the manual from cover to cover and should be able to use those parts that apply to his particular office.

Picture Panels to Depict Vocational Agriculture in Ohio

LOY R. CLARK, Student, Ohio State University



Titles of pictures appearing in this panel are: left panel—Producing Good Livestock, Planning Together, Repairing Machinery, Managing an Enterprise, and Raising Breeders; Center panel—Recognizing Values, Proving Accomplishments, Testing Quality, and Preventing Diseases; Right Panel—Telling the World, Growing Profitable Crops, Checking Returns, Repairing Equipment, and Labor Saving Devices.

THAT photography and photographs can do a lot to promote vocational agriculture in Ohio, is the basic principle upon which Dr. W. F. Stewart, head of the department of agricultural education, and L. W. Nelson, graduate student in agricultural education, are working on, as they have been planning the preparation of picture panels to present a graphic portrayal of vocational education in Ohio.

Two series of panels are being planned: one centered on vocational agriculture in the high-school program, and the other series telling the story of the present plan for student teaching. One hundred selected teachers, including the supervising teachers in the five training centers, were asked to vote on the 15 items in each series which they felt were essential for an understanding of the program. There were 44 possibilities in the former and 20 in the latter list.

Items receiving 50 to 30 votes, and listed in rank order in the series of ideas for pictures on vocational agriculture in Ohio schools were: parent and

son banquets or meetings; class-room and shop activities; field-trip activities; judging contests; testing of seed, milk, or soil; public speaking; conducting meetings; participation in fairs; project work or management; farm and project records; conservation activities; better livestock programs; advancement in FFA; practicing parliamentary procedure; and production contests.

Uses of the Panel

Items receiving from 53 to 41 votes listed in rank order in the list of ideas for pictures in Ohio's plan for student teaching were: planning and giving shop demonstrations; making farm visits to supervise farming programs; organizing instructional material for class use; assisting in classroom and shop routine; planning and teaching lessons in all-day, part-time, and evening classes; trainees being visited and supervised by a member of the staff of the department of agricultural education; trainees being directed by supervising teachers; parent

and son banquets; and helping plan projects such as community fairs.

Picture panels may be used in the classroom to secure more interest and understanding on the part of the students at county and community fairs, and at other meeting places of rural people. Due to the broad background, experience, and attitudes of the various audiences, those constructing panels must select pictures carefully.

The best type of panel to use has not been determined; but Mr. Nelson believes that panels should be divided according to subjects similar to: better livestock, crop improvement, machinery and equipment savings, farm leadership and co-operation, and rural recreation.

Pictures for panels may be collected either by individual instructors, by the state department of agricultural education, or by a combination of the two. The state department can also try to help instructors determine what types of pictures are better and how to use the pictures to best carry specific points to students.

Objectives in Farm Mechanics

(Continued from page 13)

times a team of horses might be more economical. They should be taught that the man with the most and latest equipment does not necessarily make the most money, nor enjoy the most satisfactory living. Farmers need to think thru the problem of how added equipment will help them, rather than to listen to bright outlooks pictured by salesmen.

It has been pointed out that boys may recondition equipment discarded by others and obtain it at a very reasonable cost.

The following might be appropriate objectives in teaching farm mechanics in high school:

1. Develop skills necessary for taking care of mechanical jobs on the farm.
2. Help the boy acquire machinery of his own.
3. Build equipment that will facilitate the farming program.
4. Increase the boy's net worth.

5. Improve the equipment at home.
6. Develop ability to adjust and repair farm machinery.

7. Develop ability to care for and use tools.

8. Develop habits of tidiness.

9. Encourage and develop a shop at home.

10. Develop an appreciation of the value of farm machinery.

11. Develop an appreciation of good workmanship.

12. Give interest and variety to the routine of daily classroom work.

